

Care of Seedlings

During transport, keep seedlings cool, well ventilated, and shaded, if not refrigerated. Roots must be kept moist until trees are in the ground. Protect the roots of bare root seedlings with gel, wet moss, burlap, or other moistened packing material. Do not allow roots to dry out. Postpone planting during periods of low soil moisture and dry weather. Plant as soon as possible after delivery.

Site Preparation

Elimination of perennial vegetation (especially sod forming grasses) is critical to seedling establishment.

Reed canarygrass, brome, fescue, orchard grass and all warm season grasses must be killed and/or destroyed by tillage in at least a 2-foot radius circle or 4-foot wide band, with the planted seedlings centered in the grass-free area. Depending on the site, it may be necessary to start early in the growing season prior to planned fall planting by spraying one or more times with recommended herbicides. Contact your IDNR District Forester or Cooperative Extension Service (CES) representative for specific herbicide recommendations. Use supporting practices, if necessary, to control accelerated erosion and/or runoff. For more detailed information refer to practice standard Forest Site Preparation, 490.



Photo Courtesy of Dave King-NRCS 1996

Use High Quality Planting Stock

Inspect planting stock and discard weak, moldy or damaged material. Any plant materials that have been dried, frozen, or subjected to mold or high temperatures will be assumed to be dead and will not be planted. Minimum size of bare root seedlings is approximately ¼ inch caliper (1 inch above root collar, equal to the diameter of a #2 pencil), 12 inch top and 8 inch roots. Minimum size of air root pruned potted stock is 3/8 inch caliper, 3 feet tall and 1-gallon container. See practice standard Tree/Shrub Establishment (612) for more information.

Planting

Plant bare root and container seedlings as deep or slightly deeper than they grew in the nursery (at or slightly below the root collar, see Figures 1 and 2). Ensure that planting holes are deep and wide enough to fully extend the roots. Pack the soil firmly around each seedling. For detailed guidance by planting stock type, including planting dates, see practice standard Tree/Shrub Establishment, 612.

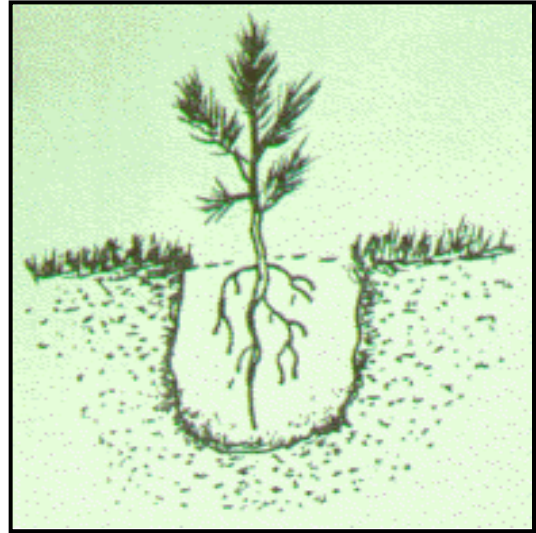
Tips for successful planting:

- Enlist a consulting forester who is a member of the Illinois Consulting Foresters Inc. or an experienced planting contractor.
- Obtain and check references.
- If using on-farm labor, enlist the help of IDNR or NRCS for onsite advice.
- Plant only when soil moisture is good (moist in upper 10 inches).
- Plant as soon after delivery of seedlings as possible.
- Secure cool storage in advance, in case planting must be delayed.
- Never wash roots of bareroot seedlings.
- Determine depth of planting equipment and root prune only if necessary. Prune taproot only, never lateral roots.



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Figure 1. Root collar of black walnut bare root seedling.



South Carolina Forestry Commission

Figure 2. Plant bare root seedlings slightly deeper than the root collar.

Maintenance

Control competing vegetation until the seedlings are established. Maintain the grass-free area described above until seedlings are at least equal in height to competing grasses. Protect tree and shrub seedlings from wildfire, insects, disease, and animals.

Replanting is required when survival after one growing season is less than 70% of the minimum number specified in the Tree/Shrub Establishment (612) standard, counting desirable natural regeneration.

Sketch of Planting Site (or attach map/aerial photograph)



Tree/Shrub Establishment (612TS) Specification Sheet

Producer : _____ Tract: _____

Fields: _____ Acres: _____

Row spacing (ft.): _____ In-row spacing (ft.): _____

Number of Stems/Acre at Various Spacings			
Spacing	Stems per acre	Spacing	Stems per acre
5 X 5	1742	10 X 10	436
6 X 6	1210	10 X 12	363
6 X 8	907	12 X 12	302
6 X 10	726	14 X 14	222
7 X 10	622	15 X 15	194
7 X 7	889	16 X 16	170
8 X 8	889	18 X 18	134
8 X 10	681	20 X 20	109
9 X 9	544	30 X 30	48
9 X 10	538	40 X 40	27

To calculate stems/acre for other spacings: 43,560 divided by (row spacing x stem spacing) = stems/acre.

Total Acres: _____ X Seedlings/Acre: _____ = Total Number of Seedlings: _____	
Soil Series: _____	Conservation Tree/Shrub Suitability Group: _____

Woody Plant Materials Information (Continued on Next Page)				
Species/Cultivars	Field #	Kind of Stock ^{1/}	Stems/Acre	Total Stems
1				
2				
3				
4				
5				
6				
7				
8				

^{1/}Bareroot, container, cutting, balled and burlapped. Include size, caliper, height, and age as applicable.

Storage requirements, if necessary: _____

Planting dates _____ Site Preparation _____

Additional Woody Plant Materials Information				
Species/cultivars	Field #	Kind of Stock ^{1/}	Stems/ac	Total Stems
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				

^{1/}Bareroot, container, cutting, balled and burlapped. Include size, caliper, height, and age as applicable.

Post-Planting Weed Control		
Year 1:		
Year 2:		
Year 3:		
Post-planting Seedling Survival (stems/ac. and % of stems planted)		
Year 1:	Year 2:	Year 3:
Method of estimating seedling survival:		

References

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 Conservation Tree Planting and Timber Stand
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Chemical Weed Control in Tree Plantings. MF-656, KS
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Guide to Selection of Soil Suitable for Growing Black
 Walnut in Illinois. Losche, C.K., W.M. Clark, E.E. Voss, and
 B.S. Ashley, 1980. USDA-Forest Service and USDA-Soil
 Conservation Service, 38 pp.

